FACT SHEET

Disaster Debris Reduction Project from Hurricane Katrina

Background

On August 29, 2005, Hurricane Katrina made landfall on the Gulf Coast. The hurricane damaged the coastal regions of southern Louisiana, southern Mississippi, and southern Alabama. Approximately 260,000 residential buildings in the State of Louisiana were initially identified as structurally unfit for reoccupation.

The State of Louisiana requested assistance in this massive effort of demolition, debris handling, and ultimately volume reduction and final disposal of the waste material. Given the enormous volume of vegetative and building debris created by Hurricanes Katrina and Rita, combined with the restrictions on debris transport imposed by the Formosan termite quarantine, there is a continued need for safe approaches for reducing the volume of waste requiring disposal.

EPA's Office of Research and Development and EPA Region 6 plan to evaluate methods of reducing large volumes of debris from Hurricane Katrina in the State of Louisiana. This test has important implications for debris removal following natural disasters in the future. For this demonstration project, the utilization of a grinder and an Air Curtain Destructors (ACD) are being evaluated as a potential means for volume reduction of the debris.

Process Evaluation

The project will evaluate two processes:

1) Grinding - the handling and grinding of debris for volume reduction
2) Air Curtain Destructor - the handling and combustion of debris for volume reduction.

Benefits

This study will identify the feasibility of using alternative technology options to reduce the volume of debris. This volume reduction processes could decrease the transport of debris and save landfill space, not only for these impacted States but also for future disasters.

Objectives

A number of objectives have been defined for this study to evaluate the emissions from debris volume reduction of vegetative, non-regulated asbestos containing materials (non-RACM) and RACM using grinding and an ACD. These include the following:

- Evaluate process emissions, including asbestos, total suspended particulate/metals, particulate matter ($PM_{2.5}$), and key combustion by-products
- Evaluate ambient air asbestos concentrations released from these processes using transmission electron microscopy (TEM)
- Determine volume reduction achieved by both processes
- Assess disposal requirements for burner ash and ground material
- Develop recommended operating procedures and monitoring techniques to assure effective performance if these technologies are used in this and future responses

Location

The project is proposed to be conducted at the Paris Road Landfill in St. Bernard Parish in Louisiana. This facility is relatively isolated from populated areas.

Safeguards

EPA, its contractors, and any other workers at the site during the testing will be monitored in compliance with OSHA rules.

EPA will ensure that testing will occur only during favorable meteorological conditions.

Vegetative debris will be processed first, followed by the non-RACM, and then the RACM debris.

Using the process and ambient monitoring data, a risk assessment will be conducted to assess the exposures from these processes. This assessment will be used in developing recommendations on the future use of these processes.

More Information

More detailed information about the study can be found at this Web site maintained by EPA's Region 6 in Dallas, TX:

http://www.epa.gov/region6/6xa/burn_and_grind_pilot.htm

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